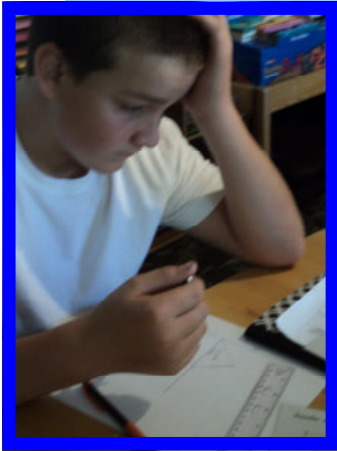


# News from Upper Elementary and Middle School



Montessori Education, at its advent, was a completely new method of education. The groundbreaking idea Maria Montessori posited flew in the face of the traditional approach of filling an empty vessel.

Montessori's system was one which honored the role the child played, one in which the child is seen as an active participant in the construction of himself. The



traditional model, which pervades even now, sees the child as a void to be filled, a blank blackboard, with the educator acting

as a transmitter of knowledge. The error in this method, lies in the fact that the educator is left to make judgments about what is easy or difficult, and what needs to be given and when.

This doesn't take into account the remarkable capabilities of the child, especially the powers

held when they are internally motivated to seek and understand. So the job of a Montessori educator and parent becomes the following.



*We therefore need to study the conditions necessary for the unfolding of spontaneous individual activities, and develop the art of allowing joy and enthusiasm for work to spread. The interest that drives spontaneous activity is a truly psychological key.*

*Maria Montessori  
Psychogeometry*





The reality of this approach is that the students are active, engaged learners. Given the right circumstances they are easily able to progress when their sense of wonder is tickled.



One source of inspiration this fall for the Nature's Classroom students has been their participation in the team building and high ropes exercises. The

goal for the group is inspiration of self-confidence through

demonstration of capability and competence, the

opportunity to take physical and emotional risks, succeed

in a supportive group atmosphere, and the tackling of

anxiety and trust. This is accomplished through

respect for effort, regardless of result in a

noncompetitive atmosphere. We hope the

students develop increased agility and

coordination, and encourage enjoyment of

physical and emotional challenges through the effort

of the team in a supportive environment. The class

looks forward to these opportunities with much

excitement and returns to the classroom with a calm

sense of self.

In Montessori, we try as often as possible to expose

the children to people who are or have followed their

inner drive and made contributions to humanity. In

art, through the celebration of their stories, we have

been examining elements of art

through the contributions of

famous artists. After looking at





samples of art by Pablo Picasso, the children visited the farm and created beautiful contour line drawings. After viewing a documentary on the life of Andy Warhol they each tried their hand at Pop Art self-



portraits in a mode similar to the famous Marilyn Monroe series. They experimented with Tessellations after viewing the work of M.C. Escher. Field trips are another way we gain

access to such mentors. We have visited Chris, at Aglow Soy Candles, to make our own candles and contemplate a business model which utilizes sustainable resources and gives back to the local community. We went to First Stage in Milwaukee to attend a play called "Don't Tell Me I Can't Fly," an inspirational story of a real Milwaukee artist who overcame adversity through creativity. We look forward to more opportunities for such



inspiration.

In our effort to take the child from the concrete to the abstract, and awe and inspire by offering the big picture, our eco-labs have been following an increasingly magnified approach of study. We started the year examining the



biosphere, the largest structure of life, and are slowly, telescopically augmenting our study with each successive lesson going into more detail. We became more specific with biomes, even more so with ecosystems, then communities, and





on to our current focus--populations. We are considering the implications of an Earth with a global population of 7 billion people, what the distribution of wealth is like, and how stereotypes effect population. We will focus in even further as the year goes on.



All this has occurred this fall, without even a word about the day to day academics. In the math area alone, the first year students are busily internalizing the difference between multiples and factors, and exploring their ability to apply the math foundation concepts the Children's House and Lower Elementary classrooms have afforded them.

Consider also the second year students busily doing operations with fractions.



This is only possible for them because they spent a great deal of time last year working on finding lowest common multiple and greatest common factor. Both concepts are deeply rooted in the work done with the beautiful bead chains in the Children's House and Lower Elementary communities.

Contemplate further, the students in their third year of Upper Elementary. Much like that important third year of Children's House, their final year in Upper Elementary is one of solidification of concepts through repetition, scaffolding on previous experiences (both sensorial and academic), and opportunities for reinforcement through mentoring, as well as further exploration. The constructive triangles they handled in Children's House when only 3 years old have become a vehicle for the development of formulas for finding area. The children are





shocked to discover these formulas on their own, as if seeing them for the first time. Now, all this doesn't happen in a vacuum. Considerable time was allowed in Children's House for exploration with the constructive triangles and metal



insets. In Lower Elementary further exploration ensued into similar, congruent, and equivalent shapes, as well as careful development of nomenclature. In Upper Elementary, even further exploration followed, proving equivalencies with these materials. The culmination of development of these formulas occurs through the use of these materials, their extensive experience with them, using correct nomenclature applied to these concepts which have been clearly engraved in their heads through the direct conduit, the hand. This sudden discovery that they can indeed come up with their own formula for finding the area of a circle, just by watching a demonstration showing that pi is the relationship between a circle's circumference and its diameter is truly one of those moments in which they glimpse what it might have felt like for the very first mathematician to make that discovery. It is only possible for them because they built with the sensorial materials, examined relationships, extrapolated information, found that base times height of a rectangle will give area, and a polygon is simply made of triangles, which are halves of rectangles, and perimeter is directly related to circumference, as apothem is directly related



to radius, so showing the key that a circle rolled across a piece of paper makes a line the length of the circumference, and that line then inlaid with the circle's diameter fits 3 and 1/7 times (pi,) facilitates an eye popping explosion of understanding on the part of the students. It has become suddenly clear to them that for a circle,  $A = \pi r^2$ , and this has been self-constructed, out of their own joy and enthusiasm.



And that is the beauty of Montessori education.